
Ballistic Missile Defense

A German-American Analysis

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FAILURE AND OPPORTUNITY

"I simply cannot conclude with the information I have today that we have enough confidence in the technology, and the operational effectiveness of the entire [national missile defense] system, to move forward to deployment. Therefore, I have decided not to authorize deployment of a national missile defense system at this time."

With these words in a September 1 speech, President Clinton deferred to his successor the decision to deploy a U.S. national missile defense (NMD). He thus punctuated the failure not only of the most recent U.S. intercept test but also, less explicitly, of his Administration's attempt to win domestic and international support for its NMD plans. Indeed, it is clear that, had the test worked, a U.S. decision to deploy would have met with the disfavor of most if not all European allies.

Some in the United States regard the President's nondecision as a respite in their determined search for a way to save the Antiballistic Missile (ABM) Treaty. On the other side of the American political spectrum, some view it as a chance to beef up the basic architecture of U.S. ballistic missile defense. Americans and Europeans alike welcome the nondecision as a chance to begin a thoughtful, patient transatlantic discussion of the issue. But those on either side of the Atlantic who regard it as an opportunity to bury NMD once and for all are sure to be disappointed, for the new Administration has signaled its intention to proceed with NMD in some form, and majorities in Congress and the public favor it.

The new Administration might act swiftly after the current techno-political pause. More likely, this will be an extended hiatus. Democrats may favor a deliberate search for a negotiated change in the ABM Treaty before taking

fateful steps toward deployment. Republicans, while making plain their determination to build a more muscular NMD, may take a year or so to reorient and expand the Defense Department's development effort.

In any case, one hopes that the new Administration will take whatever time is needed to find common ground with U.S. allies before its next move. Given enough time, it is possible—and it is surely important—for the transatlantic debate to address not just U.S. NMD but a *wider agenda* of open “post-Cold War” strategic questions, namely the function and limits of deterrence, the numbers and types of strategic offensive forces, the significance of theater missile defense (TMD), and the future of arms control. This agenda is overdue for attention, and the odds are poor of getting genuine allied support for U.S. NMD without a comprehensive discussion. Indeed, a hasty frontal attempt by the new Administration to obtain allied endorsement of its NMD plans would risk not just disappointment but even deeper U.S.-European misunderstanding than has already occurred.

This paper is intended as a German-American contribution to a reasoned, patient, wide-ranging U.S.-European strategic discussion. It is not just another NMD advocacy piece, pro or con, but a joint attempt to examine missile defense within a strategic context. It begins by describing the prevailing conditions when the United States and Soviet Union agreed to ban NMD. It then explains key differences between those conditions and today's. Against this backdrop, it examines the desirability, feasibility, and risks and costs of missile defense in the wider context. Finally, it lays out a general approach to strategic offensive and defensive arms and arms control policy that might be the basis for U.S.-European discussions and eventual common ground.

It is thus our hope that American and European policymakers will find the paper useful both as an analysis of the issues surrounding missile defense and as an agenda for consultations.

STRATEGIC CONDITIONS DURING THE COLD WAR

During the era of bipolar confrontation, the threat of retaliation with strategic offensive weapons served as the guarantee against nuclear attack by one hostile superpower on the other. As both sides amassed ever-greater deliverable nuclear destructive capabilities, the adequacy of that guarantee seemed beyond question.

At the same time, no technology was available that would have made possible an effective shield against ballistic missiles. Missile-defense sensors were inadequate, vulnerable, and easily blinded. In view of the daunting problem of hitting an incoming missile with an interceptor, early attempts focused on *nuclear*-armed interceptors; the Soviet Union deployed a belt of them around Moscow, which presented the chilling paradox of preparing to detonate nuclear explosions over the very territory being defended against nuclear explosions. Even “point defense” of intercontinental ballistic missile (ICBM) silo fields was unpromising—the United States dismantled its missile defense facilities in North Dakota shortly after they had become operational.

Given these technological obstacles, the ABM Treaty’s ban on NMD was originally intended to save money that might otherwise have been wasted in a spiraling, if futile, defensive strategic arms race. The treaty was also meant to prevent future effective missile defense, which could fuel U.S.-Soviet competition in strategic offensive arms and possibly destabilize a superpower crisis by tempting one to launch a preemptive first strike to disarm the other. The United States was, if anything, more concerned about Soviet potential to develop missile defense than the Soviets were about U.S. potential. The ABM Treaty was labeled a “cornerstone of stability” between the hostile superpowers and thus between the hostile blocs that they led.

The Reagan Administration’s Strategic Defense Initiative

(SDI) of the early 1980s was meant as a bold stroke to replace entirely the logic of mutual destruction with that of mutual defense. SDI ignited a furious debate in and beyond the United States about the merits of defense versus deterrence. Yet it failed to overcome the technological obstacles to ballistic missile defense. By the early 1990s, the end of the Cold War had removed the motivation for SDI but left in place an ABM Treaty that had been agreed under conditions of U.S.-Soviet confrontation and parity that no longer existed.

In sum, the judgment in 1972, and for at least the decade that followed, was that NMD was *not needed* because of deterrence, *not feasible* because of technological difficulty, and *not desirable* because of the superpower arms race and crisis instabilities it could aggravate. Of course, because this judgment predated both the end of East-West confrontation and the onset of a dramatic technological revolution, it must be reconsidered in the new era.

WHAT HAS CHANGED?

The current U.S. global position as the one and only superpower is beyond challenge for the foreseeable future. Its strategic offensive forces are qualitatively superior and could easily be kept much larger than those of any other power. Moreover, only the United States has the potential to overcome the technical and economic obstacles to developing and deploying an effective NMD in the next decade and beyond. Therefore, with or without the ABM Treaty, the United States need not be concerned about defense against its own strategic offensive forces.

For its part, Russia is no longer a military threat to the United States or to Europe. It must continue to reduce its strategic nuclear forces because it lacks the necessary resources. An arms race of any kind with the United States would be a disaster for Russia, were it not out of the question altogether because of economic and technological lim-

itations. There is little danger of a U.S.-Russian nuclear crisis, and there is virtually no danger of Russia, with its depleted offensive force and no defense, launching a premeditated strategic first strike on the United States.

In sum, the concerns that led the United States to sign the ABM Treaty no longer exist: The risk of an offensive arms race with Russia is minimal. No possibility of an effective Russian (or other) defense against U.S. strategic forces exists. And a crisis of the sort that could prompt a nuclear first strike is nearly unimaginable.

Yet, under these circumstances—and perhaps because Cold War thinking still lingers in Moscow—the Russians are worried about U.S. ballistic missile defense and have grown more attached than ever to the ABM Treaty. While fears of renewed Russian-U.S. strategic competition are unwarranted, concerns about Russian misperception, mistrust, and missteps are not. Therefore, it is in the interest of the United States and its allies to convince the Russians that U.S. NMD is not part of a larger American effort to gain strategic nuclear domination by depriving Russia of its ability to deter nuclear attack.

The wider international strategic environment has also changed profoundly. In the absence of superpower rivalry, peace and security are now determined mainly by regional stability and deterrence. While Europe itself is increasingly peaceful, other regions of vital importance to the United States and Europeans are either plagued with conflicts (as in the case of the Middle East) or in danger of becoming so (as in the case of East Asia). Arms races involving ballistic missiles and weapons of mass destruction (WMD), often supported by external suppliers, stretch from East Asia to South Asia to Southwest Asia and the Middle East. Israel, Iran, India, Pakistan, and North Korea already possess medium-range ballistic missiles. So would Iraq if the UN inspection regime in that country did not exist.

In this environment, the United States is generally expected and prepared to intervene, if need be, to preserve or restore the peace and security in key regions, from Northeast Asia to the Taiwan Strait to the Persian Gulf. Its growing superiority in conventional military capabilities gives it the physical means to do so. The ability and will to project power into regional crises are the essence of U.S. global defense strategy. But for the credible threat of U.S. or U.S.-led intervention, important American and European interests in critical regions could be endangered by coercion and conflict under the shadow of WMD. Sometimes criticized for being too quick to use force, sometimes for being too hesitant, the United States holds the key to deterring aggression in much of the world.

In view of these changes in global security conditions, it can hardly be surprising that questions about missile defense produce very different answers than they did 30, or even 10, years ago.

IS MISSILE DEFENSE NEEDED?

In the NMD debate, too much has been made of a particular (i.e., North Korean) threat and not enough has been made of the structural-strategic logic. The likelihood that WMD-tipped missiles would actually be used by any specific adversary against U.S. territory is, of course, very small. But the threat that they *might* be used could erode the nerve of the United States, or of its essential allies, to confront aggression. Of course, if its vital national interests were directly endangered by aggression, the United States would presumably act even in the face of a WMD threat. However, threats to international peace will not necessarily present direct risks to U.S. vital interests, in which case public fear of WMD could loom large in American decisionmaking.

Compared with alternative means of discouraging U.S. or coalition intervention—conventional defense, terrorism, “cyber-warfare”—deliverable WMD are the most likely to be effective. The mere possession of WMD and ballistic missiles by states that defy the international community presents a qualitatively new risk to the United States and any coalition wishing to impose its will in the interest of regional or global security.

It is therefore only prudent to assume that WMD and ballistic missiles in the hands of potentially aggressive regional states will be an enduring feature of the new era, irrespective of the rise and fall of concern about one or another irresponsible regime. That a number of countries are in fact acquiring WMD and ballistic missiles suggests that they have become weapons of choice in the new era. Consequently, unless the United States meets the challenge posed by WMD, it must *either* accept vulnerability to WMD when upholding its global responsibilities and interests *or else* retreat from those responsibilities and interests.

Neutralizing the WMD danger is thus one of the greatest global security challenges of the new era. Experience shows that legal barriers to the spread of WMD and missiles are porous. To be clear, the Nuclear Nonproliferation Treaty (NPT), Biological and Toxin Weapons Convention (BTWC), Chemical Weapons Convention (CWC), and Missile Technology Control Regime (MTCR) are all of real value and should be strengthened and enforced. However, the reality is that nuclear, biochemical, and ballistic technologies have spread and are still spreading despite these regimes. The integration of the world economy and, more specifically, illicit trafficking in WMD and missile technology make it more difficult to deny a determined state access to such materials and know-how. Even the extraordinarily intrusive nonproliferation regime imposed on Iraq—and not available for imposition on other states—provides no long-term insurance.

Eventually, dangerous countries that seek these weapons might change or be changed, casualties of democracy movements, regime succession, or the global information revolution—witness Slobodan Milosevic in Yugoslavia. But this could take decades—witness Saddam Hussein in Iraq and Kim Jong Il in North Korea—during which WMD proliferation will proceed apace. Instead of banking on the demise of such regimes to ease the WMD threat, we must prepare for them to become dangerously reliant on WMD as they grow weak and desperate. North Korea, for instance, already has no other leverage left.

Of course, nuclear deterrence can help neutralize the dangers from WMD and missile proliferation. Nuclear deterrence alone, however, is inadequate. The threat of nuclear retaliation will not always be credible, particularly in deterring “low-level” ballistic missile and WMD use, such as chemical or biological attacks. Under this shadow of doubt about the credibility of nuclear deterrence, the United States and its allies may shy away from decisive action against hostile, if otherwise weak, states possessing deliverable WMD.

The order to use nuclear weapons if deterrence fails is as grave and difficult a decision as any President could make. Such a decision would likely trigger wide international condemnation, particularly in the case of a nuclear response to a chemical or biological attack. Having avoided the use of nuclear weapons since 1945, it is essential not to become more dependent on the threat of their use to counter the growing danger of WMD proliferation. Therefore, there must be some available alternative to obliterating a country because its despot was reckless enough to use WMD.

So, a way is needed to destroy enemy WMD and ballistic missiles. The option of doing so before they are launched—a preemptive “counterforce” attack—should not be excluded. This option, too, faces technical obstacles

and, in any case, raises vexing political and legal questions regarding the initiation of offensive force that are not raised by missile defense.

Therefore, if technologically feasible and affordable, ballistic missile defense offers an important option to protect against blackmail and threats from states possessing WMD and ballistic missiles. Ballistic missile defense could augment deterrence by raising doubts about the success of a missile attack.

If a WMD-armed ballistic-missile attack were carried out nevertheless, defense would be essential for reducing the destruction. Because defense does not rule out retaliation by the United States, it cannot weaken deterrence. Indeed, it would make retaliation more legitimate and therefore at least marginally more credible. Finally, by raising doubts about the efficacy of WMD attacks, missile defense could discourage nuclear, biological, and chemical weapons proliferation.

In sum, missile defense can: reduce the danger that the United States will be forced to threaten or resort to the use of nuclear weapons; inspire caution in potential regional aggressors; and remove or at least reduce the payoff for acquiring WMD and ballistic missiles. Of course, it can serve these purposes only if it works.

IS MISSILE DEFENSE FEASIBLE?

Information technology offers the possibility of consistent, high-confidence defense against limited ballistic missile attacks by the use of nonnuclear interceptors. Missile defense is already feasible at the theater level. TMD systems, such as the American PAC-2, the Israeli Arrow and the Russian S-300, are already deployed. Ongoing development is aimed at achieving higher effectiveness and reliability. The "hit-to-kill" principle used in PAC-3 and

Theater High-Altitude Area Defense (THAAD) by the United States has been proven in several flight tests. Thus, TMD against ballistic missile attacks on U.S. troops, allies, and friends is not an open question for the distant future but a matter of improving and expanding existing capabilities.

Missile defense against strategic ballistic missiles (i.e., NMD) is technically more challenging than TMD because of the speed and range of such weapons. Yet, reliable, nonnuclear hit-to-kill defense of the United States against low-end (double-digit) attacks appears technologically feasible within a decade or so. Missile defense against larger threats is much harder because, as a rule, multiplying the number of incoming targets lowers confidence in or presents prohibitive costs of defense. Thus, there is a certain technical-economic barrier to the effectiveness of NMD against "established" nuclear powers with relatively large (triple-digit) forces. This natural barrier can help in managing unwanted consequences of U.S. NMD vis-à-vis Russia and China.

Even against relatively small missile raids, the "thin" land-based NMD developed by the outgoing U.S. Administration could prove ineffective against all but the crudest attacks if countermeasures (e.g., decoys) are used against it. Furthermore, the head-on intercept angles and high velocities of homeland-based interceptors relative to incoming missiles are inherently disadvantageous. It would therefore be a mistake to assume that NMD, once begun, will not grow beyond the outgoing Administration's initial design.

At the same time, improving the effectiveness of defense against small missile attacks does not necessarily translate into effective defense against large ones, which can defeat even sophisticated defense by sheer numbers. Again, this distinction between effective low-end defense and high-end

missile defense is critical from a strategic and arms control point of view. Currently, the approaches under serious discussion in the mainstream of the U.S. political spectrum are of the low-end sort. None of the technologies and designs under current consideration, even in combination, promises thorough protection against attacks involving hundreds of missiles.

What, then, would constitute effective low-end NMD? In ballistic missile defense, *tiering* is especially rewarding. With seamless target tracking and cuing, each tier of interceptors can focus on “leakers” from the preceding one. If the WMD threat develops as it might, the United States could devise or develop a multitier architecture, integrated by a single sensor/battle-management system. In such an architecture, a synergy between TMD and NMD could be exploited:

- *at the theater end*, boost-phase interceptors (air-, land-, or ship-based) to kill missiles, of any range, just after launch;
- *in the middle*, roaming ship-based midcourse interceptors to protect U.S. forces, allies, or territory, depending on warning time, threat, and deployment;
- *at the homeland end*, land-based interceptors to serve as the last line of U.S. territorial defense.

Although the raw technologies for such an architecture exist, the systems engineering and integration challenge is monumental. It is not certain whether such a robust and costly (more than \$100 billion) defense is required in its entirety. In any case, such a system cannot be built quickly, and it need not be built all at once. One approach, taking advantage of the investment of recent years, would be to start with the land-based leg and work outward. A quite different approach would be to concentrate initially on developing ship-based, boost-

phase, and midcourse intercept options, which can also contribute to theater defense of forces and allies—arguably the most immediate priority for missile defense.

Of course, feasibility entails not only technical practicality but also international legality. *Any* effective NMD will require major changes in the ABM Treaty. After all, that is what the treaty was carefully drafted to ban for its signatories. Revision of the ABM Treaty to permit effective NMD might be worse than no treaty at all, because it would contradict the purpose stated in its very first article—hardly good law and certainly not a good model for arms control.

Rather than trying to minimize change to an old treaty's text, it is worth taking a fresh look at how missile-defense arms control might be helpful in the new era. One reason to have some sort of future limitation on missile defense is to ensure that effective defense against low-end threats does not provide an easy breakout option for defense against high-end threats. Having a barrier against missile-defense breakout is of course less important for the United States than for Russia, in view of the latter's inability to build an effective NMD. Inherently, an agreement permitting low-end defense would discriminate in favor of the United States, Russia, and other established nuclear powers with sizable forces. It would reward countries for having large long-range missile forces if they have any at all—admittedly, a feature of ambiguous value. It is also far from obvious what specific constraints should be embodied in such a different treaty. Thus, although it is clear that the ABM Treaty as now written has outlived its purpose, it is not clear what, if any, modified version should be left or put in place.

DOES MISSILE DEFENSE WARRANT THE COSTS AND RISKS?

Fair and important questions have been raised about the ramifications of ballistic missile defense, especially NMD, for WMD proliferation, relations with Russia, relations with China, regional arms races, alliance solidarity, and the ability to afford other defense priorities. Answering them requires consideration of the wider strategic agenda mentioned earlier.

WMD Proliferation

Some opponents of missile defense argue that it will stimulate WMD and missile proliferation. The reasoning behind this argument is elusive. The absence of missile defense does not seem to have retarded WMD and missile proliferation over the last 30 years. It is doubtful that any state has elected to forgo the acquisition of WMD and ballistic missiles because there has been no defense against them. It is also difficult to see how refraining from deploying missile defense as it becomes feasible can improve the proliferation picture. The United States is more likely to slow proliferation by accepting deep cuts in its strategic offensive forces than by leaving itself exposed to the missile forces of nations with newly acquired WMD.

If anything, missile defense should discourage most states with an interest in threatening the United States or U.S. allies with WMD. The concept for tiered missile defense described above would frustrate states that lack the technical wherewithal to defeat it, especially given its potential effectiveness and adaptability. If the thin system for NMD contemplated by the outgoing U.S. Administration is enough to worry the Russians and Chinese, a better system would surely cause lesser states to doubt that they could strike U.S. targets with the few, simpler WMD-bearing missiles within their means.

Of course, some WMD proliferants or aspirants might be so determined to have ballistic means to threaten the United States that they will not be dissuaded by U.S. missile defense but instead will try to assemble ever larger and more sophisticated forces. While this cannot be excluded, a defensive-offensive arms race with the United States would bankrupt most countries of concern. Conversely, those countries with the potential to achieve and maintain the offensive capacity to overcome U.S. NMD are the very ones against whom, in our view, U.S. NMD should not be directed—namely, Russia and China.

Russia

As already explained, the risk with Russia is not of resuming the East-West arms race but of aggravating its sense of inferiority, vulnerability, and resentment—a bad combination. Regardless of U.S. NMD plans, Russia will be hard-pressed for the foreseeable future to maintain a strategic offensive force larger than 1,000 deliverable warheads. (Russian President Vladimir Putin's recent proposal for his country and the United States to lower their strategic forces to no more than 1,500 weapons describes the very upper limit of Russian strategic offensive potential.) If the United States does deploy NMD and at the same time keeps a substantially larger offensive force than Russia's, the Russians could begin to feel more second-rate than ever. Worse, they might even start to worry about the credibility of their nuclear deterrent vis-à-vis the United States.

This unfortunate Russian state of mind could form even though the larger U.S. force is permitted by existing START agreements and the United States would have no reason to contemplate a strategic attack against Russia. Thus, the mere fact of U.S. strategic supremacy could roil Russian relations with the West. Moscow could respond to such a situation by planning to launch its missiles on warning of attack or putting multiple warheads back on its ICBMs.

The United States and Europe have no interest in stimulating such measures, especially when they unquestionably want Russia to reduce its reliance on nuclear weapons.

The most sensible U.S. strategic posture toward Russia is mutual deterrence at the lowest prudent level of strategic offensive forces. Even an impoverished Russia can maintain an offensive missile force that would make complete defense against it prohibitively expensive. Moreover, because the United States will not likely feel a need to challenge Russia directly with conventional military power, there is less need for concern about Russia threatening to use WMD than there is in the case of, say, Iraq or North Korea.

If mutual deterrence was tolerable when the West's way of life was threatened by a hostile Soviet Union, it should be tolerable, on a less dangerous scale, now that Russia is struggling to be a democracy, has huge internal problems to solve, and is dependent on Western economic cooperation. As enduring reciprocal trust is built in the broader political and security relationship with Russia, the significance of mutual nuclear deterrence will fade into irrelevance. For all these reasons, the United States can and should unequivocally exclude defense against Russia's deterrent force from the stated purposes and design of its NMD.

Still, Russia will be nervous and envious about U.S. NMD, and Russian relations with the United States and its European allies could suffer as a result. The best way to deal with this risk is not to abandon missile defense, which is not even directed against Russia, but to slash the U.S. offensive strategic nuclear arsenal.

Traditionally, the size of the Russian (formerly, Soviet) force has determined the size of the American one and vice versa. Even by this outdated standard, the United States does not need more than about 1,000 deliverable weapons, because Russia currently cannot afford more.

The second traditional criterion in sizing the U.S. force is targeting requirements. During the Cold War, the standard was the ability to obliterate Soviet nuclear, conventional military, industrial, and state power. This drove target lists to staggering levels. Today, 1,000 weapons are more than enough to devastate Russia or China or any other state. (Doubts about low-end deterrence involve the *certainty* rather than the *scale* of U.S. retaliation.) Finally, whatever the fate of the ABM Treaty, no country—not even the United States—will be able to erect an effective defense against 1,000 sophisticated weapons.

The new U.S. Administration thus has the chance to reduce U.S. nuclear weapons to 1,000 or fewer—a big step toward diminishing their importance in the world, countering criticism about U.S. NMD, and bolstering the nuclear non-proliferation regime. Such a level would fit well with missile defense against the low-end WMD threat: large enough to defeat any defense that might be built but small enough to allay fears of U.S. first-strike potential when combined with effective low-end NMD.

In START negotiations, the United States could offer to reduce to below 1000 weapons and constrain NMD breakout potential, in return for Russian agreement to accept comparable limits and revise the ABM Treaty to permit effective low-end NMD. Although patently beneficial to the Russians, it is not clear they would accept this deal; replacing the ABM Treaty would be a bitter pill for Russia to swallow. Nonetheless, the offer would demonstrate that the United States does not seek nuclear dominance over Russia, and thus it might restore some Russian self-confidence and head off moves toward launch-on-warning and multiple warheads.

So clear are the benefits that the United States should plan to reduce strategic offensive forces to 1,000 or fewer

weapons *with or without* a new START agreement—that is, even if Russia should reject the deal. Of course, this willingness to take deep cuts in any case would reduce U.S. leverage to gain Russian agreement to rewrite the ABM Treaty and acquiesce in U.S. NMD. However, in that case, the United States could withdraw from the ABM Treaty and proceed with effective low-end NMD, in parallel with deep offensive cuts—a second-best but acceptable course of action.

China

China's current intercontinental missile force is so small—about 20 weapons—that a robust low-end U.S. NMD could stop it. Of course, the United States should not refrain from building an effective defense against non-Chinese WMD threats for the sake of mollifying the Chinese, who will object to *any* U.S. missile defense system. At the same time, proceeding with NMD will require the United States to consider, decide, and declare what kind of strategic nuclear relationship it is prepared to have with China.

As the Chinese modernize their nation, they will, quite naturally, increase and improve their nuclear forces, including those that can reach the United States. Strategic forces have been a relatively low Chinese military priority. Indeed, China has been willing to live with the possibility that its small intercontinental arsenal could be destroyed by a U.S. nuclear first strike. Additional resources for the Chinese military have been spent chiefly on improving its ability to intimidate Taiwan and to raise the cost of U.S. intervention in defense of Taiwan.

Still, it must be assumed that China will be intent on eventually having a second-strike nuclear deterrent against the United States. The existence of U.S. NMD will make

this condition no more or less important for the Chinese, and probably no more or less urgent. If, in the worst case, U.S. NMD does accelerate China's quest for a second-strike deterrent, the United States will be left no worse off, assuming, as we do, that its NMD will not be directed against China and that Americans can learn to live with a Chinese deterrent.

Americans *can* live with vulnerability to Chinese nuclear retaliation, as they did in the case of the USSR and do now in the case of Russia. It is hard to imagine why the United States would launch a strategic nuclear attack on China, thus making the question of Chinese retaliation moot. In addition, as Chinese strategic offensive forces grow and improve, trying to maintain a disarming first-strike capability against China would take a more massive U.S. missile defense system than is needed against small hostile WMD states. This could impoverish the rest of the U.S. defense program. Finally, China is less likely to seek a constructive relationship with the United States, or to reduce its reliance on nuclear weapons, if it perceives the United States as determined to preserve a capability to launch a nuclear attack without fear of Chinese retaliation.

Whatever missile forces China builds, the United States could slash its strategic offensive weapons, as described above, and still have more than enough to deter a Chinese attack. Moreover, deep reductions in U.S. offensive weapons could help allay Chinese fears that U.S. missile defense means the United States seeks nuclear dominance. Such cuts might also avert a costly, pointless Sino-American strategic arms race.

With China, as with Russia, the United States can and should seek a relationship in which neither nuclear threats nor a nuclear arms race would serve any purpose for either nation. In such a desirable future, U.S. ballistic missile defense against China and Russia would be not only extremely difficult and costly but also unnecessary. With the combination of clarity

that U.S. missile defense is directed at neither Russia nor China and deep cuts in offensive forces, such a future is not unrealistic. But it will require an abundance of political skill and a modicum of good will on the part of U.S., Chinese, and Russian leaders—perhaps encouraged by European leaders.

Of far greater concern to the Chinese than U.S. NMD is the possibility of a U.S. TMD umbrella over Taiwan. China would undoubtedly react to such a capability not only in its relations with the United States and with Taiwan but also in the form of an ever-larger theater missile force aimed across the Taiwan Strait.

Possible Arms Race in Other Parts of the World

The case of Taiwan underscores that the development and deployment of TMD must be approached with as much care as NMD. In the longer term, as TMD systems become a common element of the armed forces of a number of countries, defensive-offensive regional arms races cannot be ruled out. As long as it would be possible to saturate the opponent's missile defense, it might seem appropriate to acquire more numerous or more sophisticated theater-range missiles.

On the whole, TMD will be an important capability in preserving the ability and will of the United States and its coalition partners to use force to restore international peace and security. However, any decision on where and how to deploy TMD must consider the possibility that the buildup of missile forces in response could in the end diminish regional security. The United States does not want to get into TMD-missile arms races with numerous adversaries around the world.

Alliance Solidarity

It is hard to see how NMD could “decouple” the United States from European security, as some skeptics of NMD have claimed. Rather, the United States would be *more* likely to take decisive action, in Europe as elsewhere, if it were *less* concerned about its own vulnerability to WMD. Vital U.S. interests in Europe and its security, demonstrated by the engagement of U.S. forces in European contingencies, are an abundant guarantee of all necessary U.S. action, should Europe be threatened.

At the same time, a situation in which the United States was substantially less vulnerable to missile attack than its closest allies could raise European concerns that the United States would react differently, perhaps less cautiously, than Europe in the event of a crisis. Such concerns may be particularly acute in the event that European interests are less involved in a regional crisis than those of the United States acting as a global power.

Because the United States has a responsibility to maintain security in critical regions, its forces and homeland may become tempting targets for WMD on ballistic missiles. This may explain why consideration of missile defense options is further along in the United States than in Europe. However, if and as global WMD and missile threats grow, and assuming the need for combined U.S.-European “out-of-area” military operations, it is important that the United States and its European partners respond with a common or at least compatible approach to missile threats. This raises questions not only of European attitudes toward U.S. NMD but also of possible European interest in ballistic missile defense.

Under Article 5 of the NATO Treaty, European NATO countries could need missile defense if an adversary threatens their territory with ballistic missiles of sufficient range.

In addition, when European countries employ their armed forces to carry out "crisis management" missions (through NATO or the European Union), those forces or the countries themselves could be threatened by WMD-armed ballistic missiles. Regions adjacent to Europe contain hundreds of such ballistic missiles, some in the hands of potential adversaries. Should these European forces be operating jointly with U.S. forces, equal protection of all forces involved would be indispensable, politically and militarily. In the combined U.S.-European case, as in the U.S.-only case, possessing the means to defend forces against WMD-armed ballistic missiles would be preferable to total reliance on nuclear deterrence and retaliation. This suggests that U.S.-European cooperation in at least TMD will become increasingly important.

At some point, depending on the extent of the international security responsibilities they accept, as well as on the extent and range of possible threats of WMD and ballistic missiles to Europe itself, Europeans may want their own territorial missile defense, perhaps under a common European Security and Defense Policy.

With these considerations in mind, the missile defense architecture adopted by the new U.S. Administration should be compatible with possible missile defense of European forces and territory, should Europeans find such a system necessary. And, as the United States shapes its missile defense plans, European leaders should begin to consider European requirements and options.

A multitiered architecture, integrating U.S. TMD with NMD, would lend itself to future options by which Europeans could, with U.S. cooperation, protect their forces and territory.

Cost

In the near term, the cost of developing and building U.S. ballistic missile defense would exceed the savings

from possible U.S. strategic offensive force cuts. (In time, annual savings from deep strategic offensive force cuts could exceed the annual cost of missile defense, mainly because of the need for fewer submarines.) Unless the U.S. defense budget is raised to cover the near-term gap, resources will have to be reprogrammed from the power projection and engagement missions of U.S. forces. It would make little sense for the United States to starve power projection and engagement capabilities for the sake of building a missile defense system to preserve the credibility of projection and engagement missions. At the same time, unless investment in TMD and NMD is made to avoid the vulnerability of U.S. forces and territory to WMD-armed ballistic missiles, U.S. power projection and engagement could be undermined.

The United States would therefore have to increase defense spending if it is to have effective missile defense. There appear to be adequate national fiscal resources and public support for this, especially if missile defense is made part of the rationale. Whatever the future of U.S. NMD, European allies have no reason to be concerned that the United States will spend too little money on defense in general or on power projection and engagement missions in particular, especially with more than 3 percent of its growing GDP being committed.

OTHER MEASURES TO COUNTER THE WMD DANGER

In sum, ballistic missile defense seems desirable, feasible, and affordable as a way to reduce the danger of WMD. But it is not sufficient. It should be but one element of a broader political-technological-military counter-WMD strategy.

U.S. interest in missile defense has led others, including close friends, to observe an American predilection for a

“hardware” solution, a *deus ex machina*, to the problem. This criticism is partly fair—a certain American infatuation with technology is irrefutable—but not entirely. For example, the diplomatic efforts of the United States to end its estrangement with Iran and the isolation of North Korea are aimed partly at reducing the incentives of those countries to acquire deliverable WMD. In the North Korean case, a number of “carrots” have been directly linked to curtailment of both nuclear and missile activities.

Still, the United States, and others, can do more to limit the danger. Ratification of the Comprehensive Test Ban Treaty (CTBT) by the U.S. Senate would not only improve the political climate for nuclear nonproliferation but also allay international concerns that the United States means to live by its own convenient set of rules—concerns that aggravate foreign doubts about U.S. NMD. Similarly, the United States should set aside its reservations about the full implementation of the CWC and BWC, which benefit it as much as they do any other country. Finally, it could reinforce nuclear nonproliferation norms by redoubling its cooperative (“Nunn-Lugar”) effort to get Russia’s excess nuclear weapons and fissile material under lock and key.

In addition to these rather obvious steps, the United States should consider bolder measures aimed directly at the WMD danger:

- It could offer to eliminate all of its land-based ballistic missiles and call on others to join in a worldwide ban. A substantially smaller U.S. strategic offensive force could consist entirely of submarine- and bomber-based weapons without compromising U.S. nuclear security or strength. Although Russia and China would no doubt refuse such a ban because of their dependence on ICBMs for strategic deterrence, most countries should be willing to subscribe. This would put a bright spot-

light on, and demand an explanation from, those countries that demur.

- The United States could give up the option of using nuclear weapons except in response to the use of WMD against its territory, troops, and friends. For the United States to cling to its prerogative to use nuclear weapons in response to conventional attack is a Cold War anachronism, especially in view of awesome U.S. conventional superiority. It could also call on other nuclear-capable states to make the same pledge and perhaps propose a UN Security Council or General Assembly resolution outlawing the first use of WMD. Such an initiative would have the important added advantage of legitimizing nuclear retaliation for WMD attacks, thereby sharpening deterrence.
- The United States could offer not to transfer ballistic missile defense systems or technology into regions where doing so could, in its estimation, result in the growth of missile arsenals. This would, of course, not include NATO Allies. However, it might include East Asian friends of the United States. Such an assurance vis-à-vis Taiwan would address Chinese concerns. However, it should not be made unless China offers reciprocal assurances regarding the use of force against Taiwan.

The combination of deterrence, missile defense, and such initiatives would go a long way toward reducing the danger of WMD-armed ballistic missiles. What about other methods of delivering WMD—methods that might even be stimulated by frustrating the missile option? Alternatives include delivery by aircraft and cruise missiles and smuggled-in or homemade “suitcase” WMD.

To cite such options as a reason to forgo defense against ballistic missiles is tantamount to arguing against any form

of gun control because humans can hurt each other with knives, clubs, and fists. There is no question that all societies, including American, must become accustomed to a degree of vulnerability as borders become porous, transport ubiquitous, and infrastructure integrated. But alternative delivery means require planning, resources, and suspicious activities—all of which are detectable by improved domestic and international intelligence. The more ambitious the WMD attack plan, the more likely it is to be disclosed and thwarted. In any case, if we suspected that a hostile country was developing a nonmissile scheme to detonate WMD on U.S. or allied territory, we surely would take whatever steps were necessary to frustrate it. So why not do the same in the case of a ballistic missile threat that we *know* is growing?

AN INTEGRATED STRATEGY

The beacon for U.S. and European policy concerning WMD should be clear and simple: to minimize their military and political value and the possibility of their use. The technical feasibility and affordability of effective missile defense in the years to come will offer a new option: to reduce if not to eliminate the penetration capability of small numbers of attacking ballistic missiles tipped with WMD. Thus, the utility of acquiring WMD and ballistic missiles would be reduced by missile defense, as would the likelihood—and, in the worst case, the consequences—of their use.

At the same time, arms control can play an important complementary role in reducing the prominence, levels, value, and dangers of WMD. Arms control can also help in managing the risks associated with deployment of both NMD and TMD. Moreover, the political environment in which missile defense is viewed—by U.S. and European

publics, by Russians and Chinese, and by the larger international community—can be shaped by arms control, depending on how bold it is.

Therefore, what is needed is an integrated approach to reducing the utility of WMD, involving prudent missile defense options, reduced offensive capabilities, and innovative arms control. Such a strategy could include the following steps:

- Reduction of the strategic offensive systems of the United States and Russia to no more than 1,000 accountable warheads should be an immediate priority. For example, the United States could reduce to eight strategic missile submarines, 20 nuclear-capable bombers, and zero ICBMs. This would leave the United States with a powerful, survivable, and flexible force of about 900 weapons, capable of overwhelming any defense. Although a fraction of today's force, it would be unrivaled.
- In addition to nuclear deterrent forces, counterforce capabilities—such as conventional anti-WMD precision-strike capabilities, strategic intelligence, and real-time tracking and targeting of mobile missile launchers—could be improved to reduce further the advantages of acquiring WMD and ballistic missiles.
- A START III ceiling of 1,000 weapons is worth seeking. However, should negotiations be blocked by the intention of Russia to preserve the present ABM Treaty, the United States should nevertheless reduce its strategic offensive weapons to the lowest possible level.
- The ABM Treaty could be replaced to allow effective (not “thin”) low-end defense while inhibiting breakout. To develop such a defense, the United States needs the rights to place interceptors and sensors in any medium (including space and the sea), use any technology, and conduct any testing it deems necessary for effective

defense. Because the ABM Treaty is not needed to preserve U.S. or allied nuclear deterrent credibility, if it cannot be replaced it should be ended.

- Arms control might help to prevent regional arms races between missile offense and missile defense, which could occur as long as there appears to be a chance to saturate the opponent's missile defense. Whether this could be achieved through a new type of universal ABM Treaty, additional export restrictions on missile technology, deliberate export of missile defense technology, or all three deserves to be studied.
- A CTBT, applied as widely as possible, would strengthen the nuclear nonproliferation regime and underscore the reduced value of nuclear weapons. Therefore, the U.S. Senate should ratify it as soon as possible. While politically difficult, such a step would allay international concern about U.S. insistence on revising the ABM Treaty.
- Chemical and biological weapons are the types of WMD most likely to be used on U.S. and European troops. The CWC and BWC should therefore be implemented fully, and new efforts should be taken to finalize negotiations on an effective BWC verification protocol in Geneva.
- Repudiating the first use of WMD would signal the reduced military value and political acceptability of such weapons, while also strengthening deterrence and bolstering the legitimacy of missile defense. A UN resolution making first use of WMD a war crime would create a clear and useful new global norm.

WHAT IS NEXT FOR EUROPE?

Given the rising technical and political prospects of missile defense, as well as the time now available for reasoned reflection and consultation, European countries should rethink their critical attitude toward U.S. NMD. In the end,

a considered judgment should take into account the following new realities:

- Effective defense against low-end missile threats is within reach. It could significantly contribute to U.S. and European security by reducing the risk and destructiveness of ballistic missile attacks with WMD.
- Preserving the credibility of intervention would strengthen deterrence and security in regions of great importance to the North Atlantic democracies.
- Missile defense should discourage acquisition of ballistic missiles and WMD.
- Missile defense will not lead to an increase in Russian strategic offensive forces.
- Missile defense will require a bold new arms control agenda, including deep cuts in strategic offensive forces and other measures aimed at diminishing the value of WMD and the danger of their use.

As the new U.S. Administration approaches decisions on future U.S. missile defense and arms control—presumably seeking Alliance consensus as it does—European governments, individually and collectively, should begin to address the unavoidable question: What kind of missile defense, if any, will Europe need in view of potential threats to European territory and to European forces participating in international peace operations and regional crisis management? As Europeans begin that consideration, they might see that the sort of integrated strategy suggested here—with tiered low-end missile defense, deep cuts in strategic offensive forces, and a bold effort to reduce the utility of WMD—could be the right framework and the right vision for them as well.



CONCLUSION

This strategy confronts the dangers and exploits the opportunities of the new era. Still, objections will arise from several different directions: the stewards of the status quo, those without faith in the new technology, those who want no arms control and massive strategic defense, those who want no defense and the abolition of nuclear arms, and those who would treat Russian and Chinese attitudes as decisive. Nonetheless, it is a strategy that would serve U.S. and European interests, preserve Alliance solidarity, bolster international security, and win wide public support on both sides of the Atlantic.